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Parts Catalog

DNEA / DWEA
DNFA / DWFA

PMG GENERATOR SET

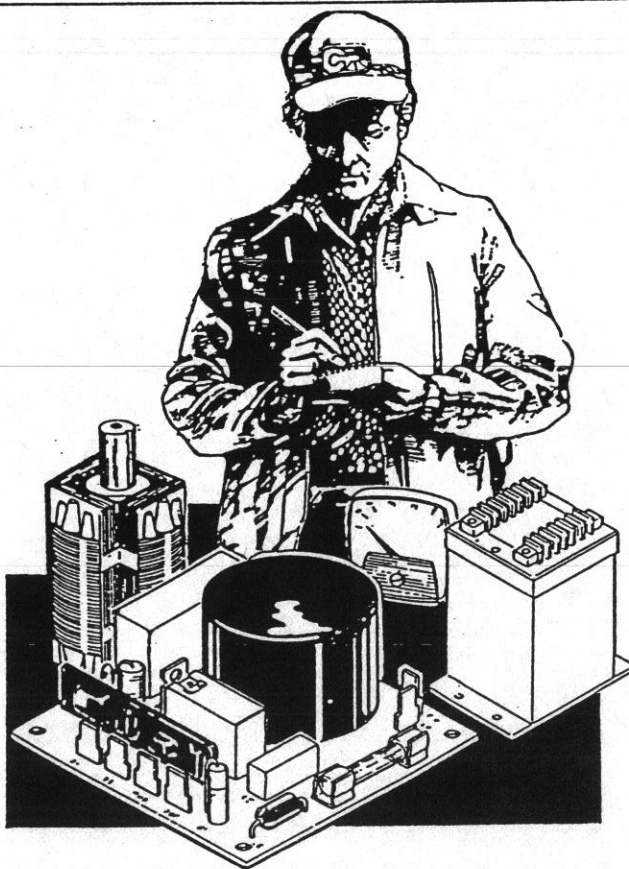



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General Information

For parts or service, contact the distributor from whom you purchased this equipment or refer to the nearest Authorized Cummins Distributor.

To avoid errors or delays in filling your parts order, always give the full MODEL, SERIAL and ID No. from the nameplate.

		AC Generator Set	
		Model _____	
kw	kva	pf	phase
voltage		amps	
duty		overload	
rpm		hz	
class of insulation		pmg voltage	
field amp max		field voltage max	
generator model no.			
voltage regulator model no.			
ID no.			
generator set serial no.			
BS5000		NEMA	

For handy reference, insert "YOUR" nameplate information in the spaces above.

▲WARNING

TAKE ALL NECESSARY PRECAUTIONS WHEN CHECKING OR CHANGING ENGINE OIL NOT TO INGEST, BREATHE THE FUMES OR CONTACT THE OIL. USED ENGINE OILS HAVE BEEN IDENTIFIED BY FEDERAL AND SOME STATE AGENCIES AS CAUSING CANCER.

▲WARNING

TAKE ALL NECESSARY PRECAUTIONS WHEN HANDLING ENGINE GASKETS. DO NOT INGEST, BREATHE, OR CONTACT DUST FROM GASKETS. USE ADEQUATE VENTILATION AND WEAR PROTECTIVE GLOVES, MASK AND CLOTHING. ASBESTOS HAS BEEN IDENTIFIED BY FEDERAL AND SOME STATE AGENCIES AS CAUSING CANCER.

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Introduction

This Parts Manual applies to the Standard Gen Sets Listed below. The illustrations are arranged in groups of related items, and each part or assembly is identified by a Reference Number. All parts illustrated are typical, and unless otherwise mentioned in the description column the parts are interchangeable between models.

These typical illustrations are subject to change and reflect only the latest replacement parts arrangement. The Right and Left sides of the Set are determined by FACING the FRONT (Engine end) of the Set.

Set Data Table

ENGINE ID. No.	GEN SET ID No.	RPM RATING	BATTERY VOLTAGE
Note 1. 6CT-G*#	Note 2. 100.0DNEA/DWEA-@	1500 RPM	24 VDC
6CT-G*#	125.0DNEA/DWEA-@	1800 RPM	24 VDC
6CTA-G*#	135.0DNFA/DWFA-@	1500 RPM	24 VDC
6CTA-G*#	150.0DNFA/DWFA-@	1800 RPM	24 VDC

Note:1 * - Letter S for Standby, Letter C for Continuous Duty applications

Note:1 # - Number 1 thru 9 used to denote size variations.

Note:2 @ - Numbers and a Letter are used to provide configuration identification, Voltage Codes follow Model Letter designations and separated from the Specification Number by a slant bar. The Specification Number: Number 1 is Standard, all others indicate configuration variations. The Specification Letter: Letter advances (A to B, B to C, etc) with major manufacturing changes.

Electrical Data Table

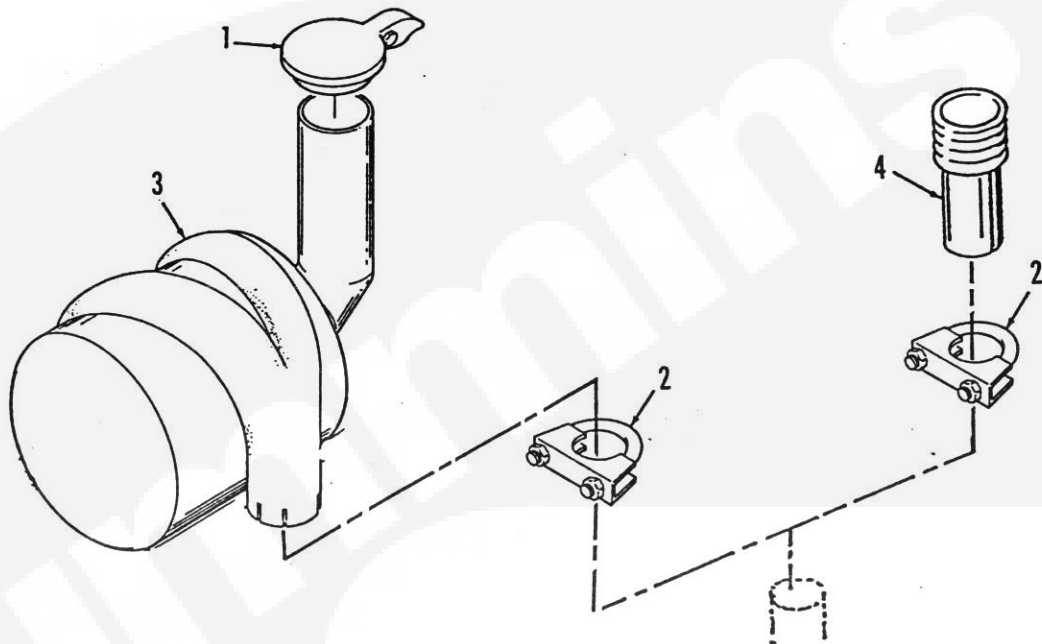
*VOLTAGE CODE	VOLTS	HERTZ	WIRE	PHASE	NOTES
H	347/600	60	4	3	
L	120/208	60	12	3	+
	127/220	60	12	3	
	139/240	60	12	3	
	240/416	60	12	3	
	254/440	60	12	3	
	277/480	60	12	3	
Z	110/190	50	12	3	+
	115/200	50	12	3	
	120/208	50	12	3	
	127/220	50	12	3	
	220/380	50	12	3	
	230/400	50	12	3	
	240/416	50	12	3	
	254/440	50	12	3	

+ - The Stators are Reconnectible.

Engine Replacement Parts

The Engine replacement parts can be ordered from the Cummins Engine Distributor except those parts modified or added during the Gen Set Assembly. When ordering engine parts, refer to the Engine Data plate and supply the Model, Serial, and CPL numbers. For assistance in ordering the Engine replacement parts, contact the nearest Cummins Engine Distributor or the Supplier from whom you purchased the Generator Set.

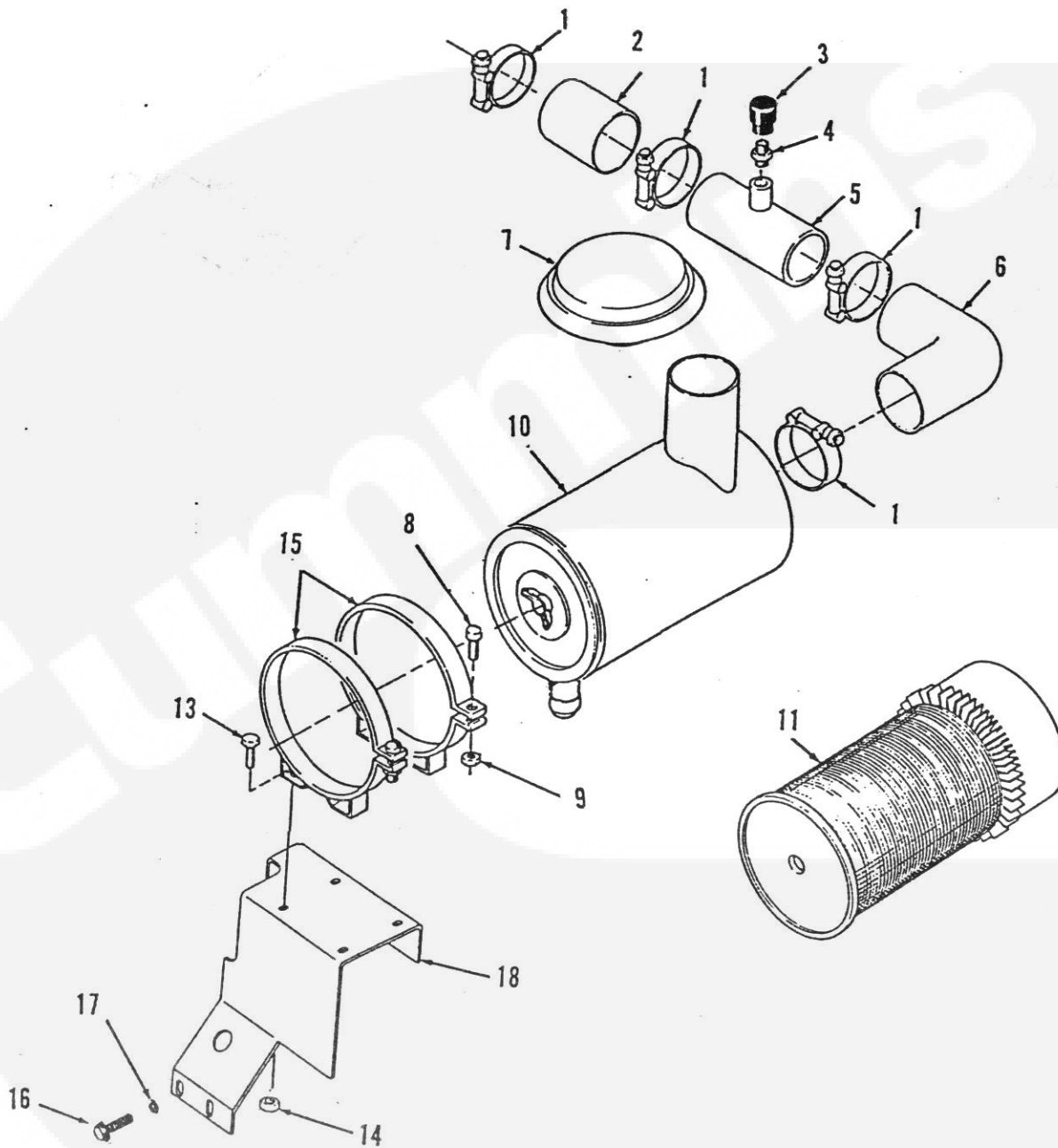
Exhaust System Components



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	155-2062-07	1	Cap, Rain
2	155-2305	1	Clamp, Muffler

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
3			Silencer
	155-2306	1	6CT Engine (D_EA Set)
	155-2307	1	6CTA Engine (D_FA Set)
4	154-2304	1	Adapter, Exhaust

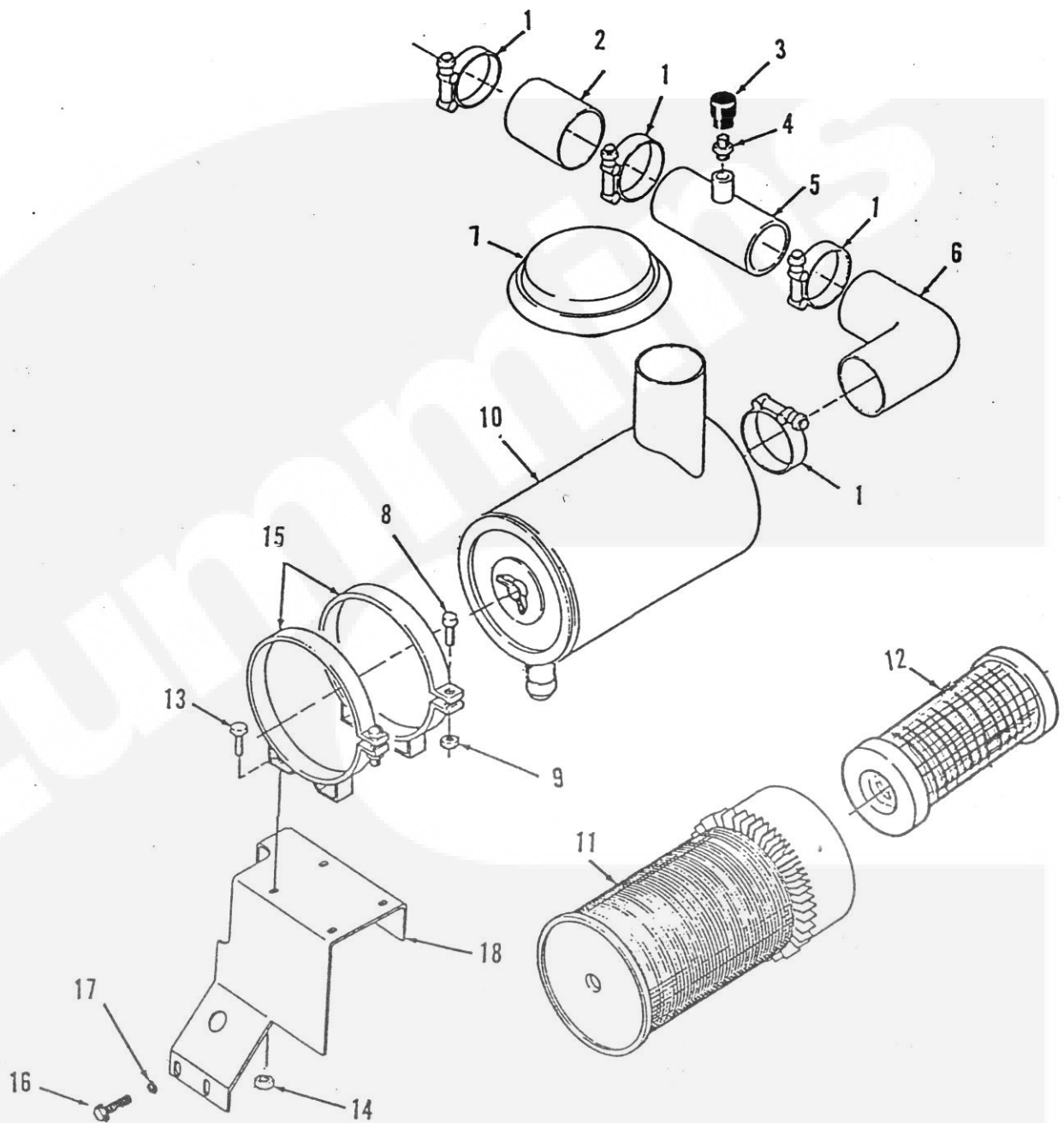
Air Cleaner - Standard



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0900	4	Clamp, Hose
2	503-1595	1	Hose
3	140-1548	1	Indicator, Service
4	140-1260	1	Adapter, Filter - Indicator
5	140-2238	1	Tube, Inlet - Air
6	503-1354	1	Elbow, Rubber - Molded
7	140-1601	1	Hood, Inlet - Air
8	815-0115	2	Screw, Machine - Fillister Head (1/4-20 x 1")
9	863-0002	2	Nut, Square (1/4-20)
10	140-2240	1	Cleaner, Air (Includes Element)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
11	140-2241	1	Element, Air Cleaner
13	821-0029	4	Screw, Self-locking - Hex Washer Head (3/8-16 x 3/4")
14	870-0281	4	Nut, Lock (3/8-16)
15	140-1973	2	Band, Mounting
16	800-2110	3	Screw, Cap - Hex Head (M12 x 1.75 x 20mm)
17	850-2012	3	Washer, Lock (M12)
18	140-2239	1	Bracket, Mounting - Air Cleaner

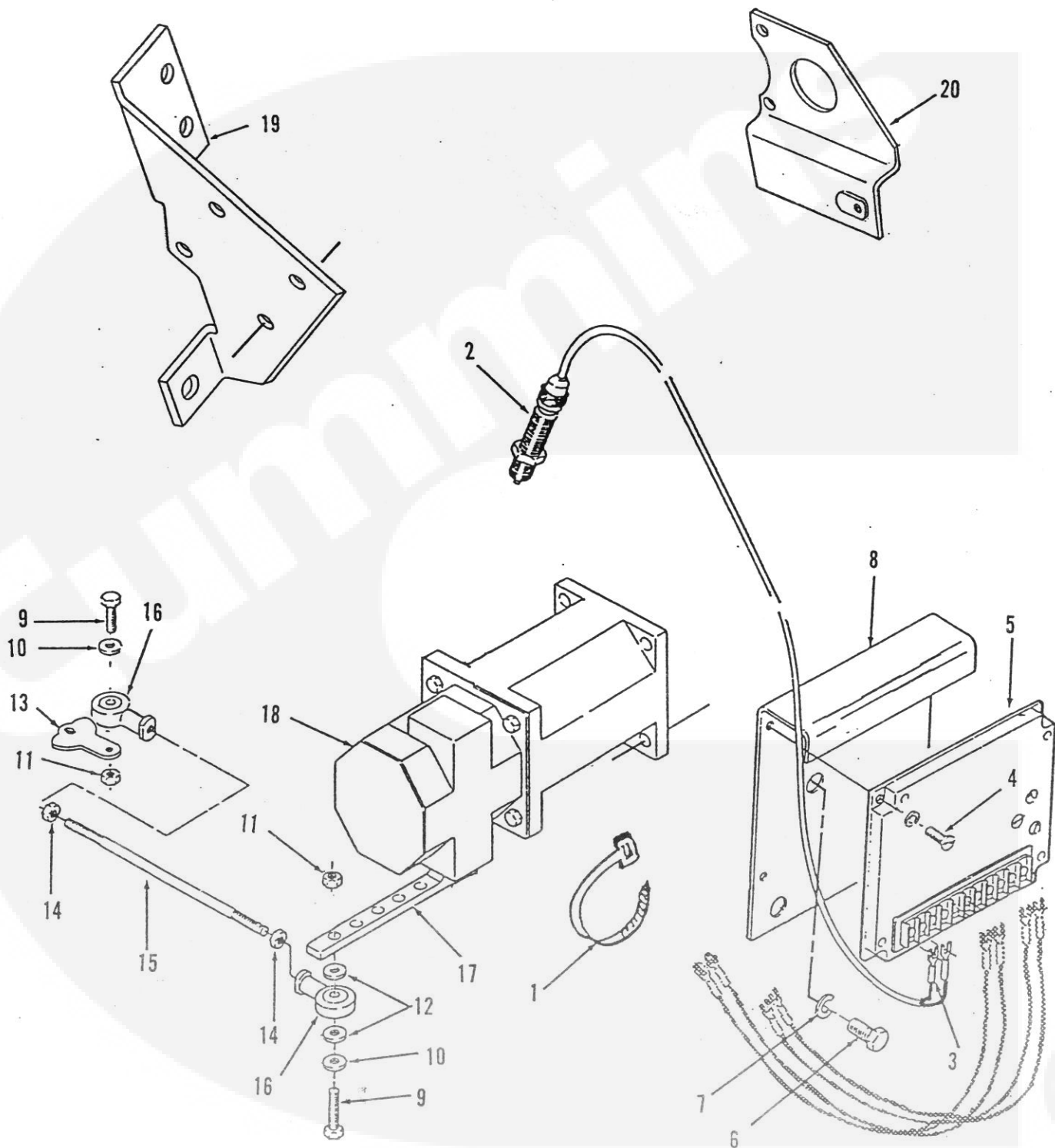
Air Cleaner - Heavy Duty



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0900	4	Clamp, Hose
2	503-1595	1	Hose
3	140-1548	1	Indicator, Service
4	140-1260	1	Adapter, Filter - Indicator
5	140-2238	1	Tube, Inlet - Air
6	503-1354	1	Elbow, Rubber - Molded
7	140-1601	1	Hood, Inlet - Air
8	815-0115	2	Screw, Machine - Fillister Head (1/4-20 x 1")
9	863-0002	2	Nut, Square (1/4-20)
10	140-2240	1	Cleaner, Air (Includes Element)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
11	140-2241	1	Element, Air Cleaner Primary (Outer)
12	140-2252	1	Element, Air Cleaner Secondary (Inner)
13	821-0029	4	Screw, Self-locking - Hex Washer Head (3/8-16 x 3/4")
14	870-0281	4	Nut, Lock (3/8-16)
15	140-1973	2	Band, Mounting
16	800-2110	3	Screw, Cap - Hex Head (M12 x 1.75 x 20mm)
17	850-2012	3	Washer, Lock (M12)
18	140-2239	1	Bracket, Mounting - Air Cleaner

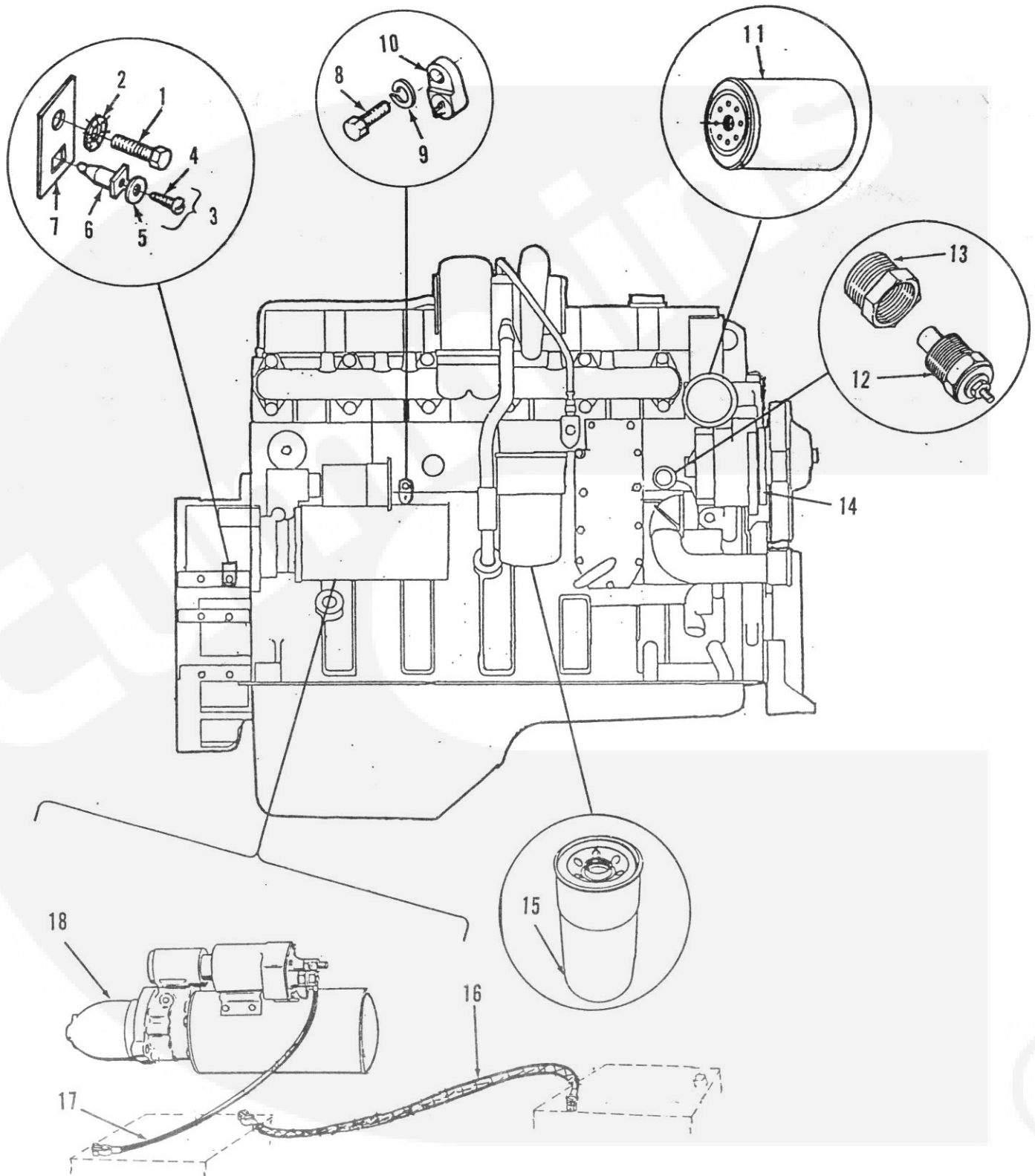
Electronic Governor



Electronic Governor

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-1445	5	Tie, Cable	15	150-2218-03	1	Rod, Governor
2	150-2201	1	Sensor, Speed (Includes Electrical Lead)	16	150-2251	2	End, Rod
3	332-1279	2	Terminal (Use on Electrical Leads)	17	150-2203	1	Lever, Actuator - Governor
4	813-0103	4	Screw, Machine - Round Head (#10 - 32 x 3/4")	18	151-0612	1	Actuator, Governor - 24VDC
5	151-0611	1	Control, Governor		800-0008	4	Attaching Parts for Actuator
6	800-2110	2	Screw, Cap - Hex Head (M12 x 1.75 x 20mm)		870-0212	4	Screw, Cap - Hex Head (1/4 - 20 x 1-1/4")
7	850-2012	2	Washer, Lock (M12)	19	150-2238	1	Nut, Lock (1/4 - 20)
8	150-2007	1	Bracket, Controller		800-2085	3	Bracket, Governor Actuator
9	815-0172	2	Screw, Machine - Hex Head (#10 - 32 x 1.00")		850-2010	3	Attaching Parts for Bracket
10	526-0327	2	Washer, Flat (15/64)	20	150-2252	1	Screw, Cap - Hex Head (M10 x 1.50 x 20mm)
11	870-0131	2	Nut, Hex W/ET (#10 - 32)		718-1021	1	Washer, Lock (M10)
12	526-0008	4	Washer, Flat (#10)		718-1027	1	Bracket
13	150-2237	1	Lever, Governor		860-2007	2	Attaching Parts for Bracket
14	870-0053	2	Nut, Screw - Hex Head (#10 - 32)				Screw, Cap - Hex Head (M6 x 1.0 x 20mm)
							Screw, Cap - Hex Head (M6 x 1.0 x 50mm)
							Nut, Hex (M6 x 1.0)

External Engine Components
Left Side



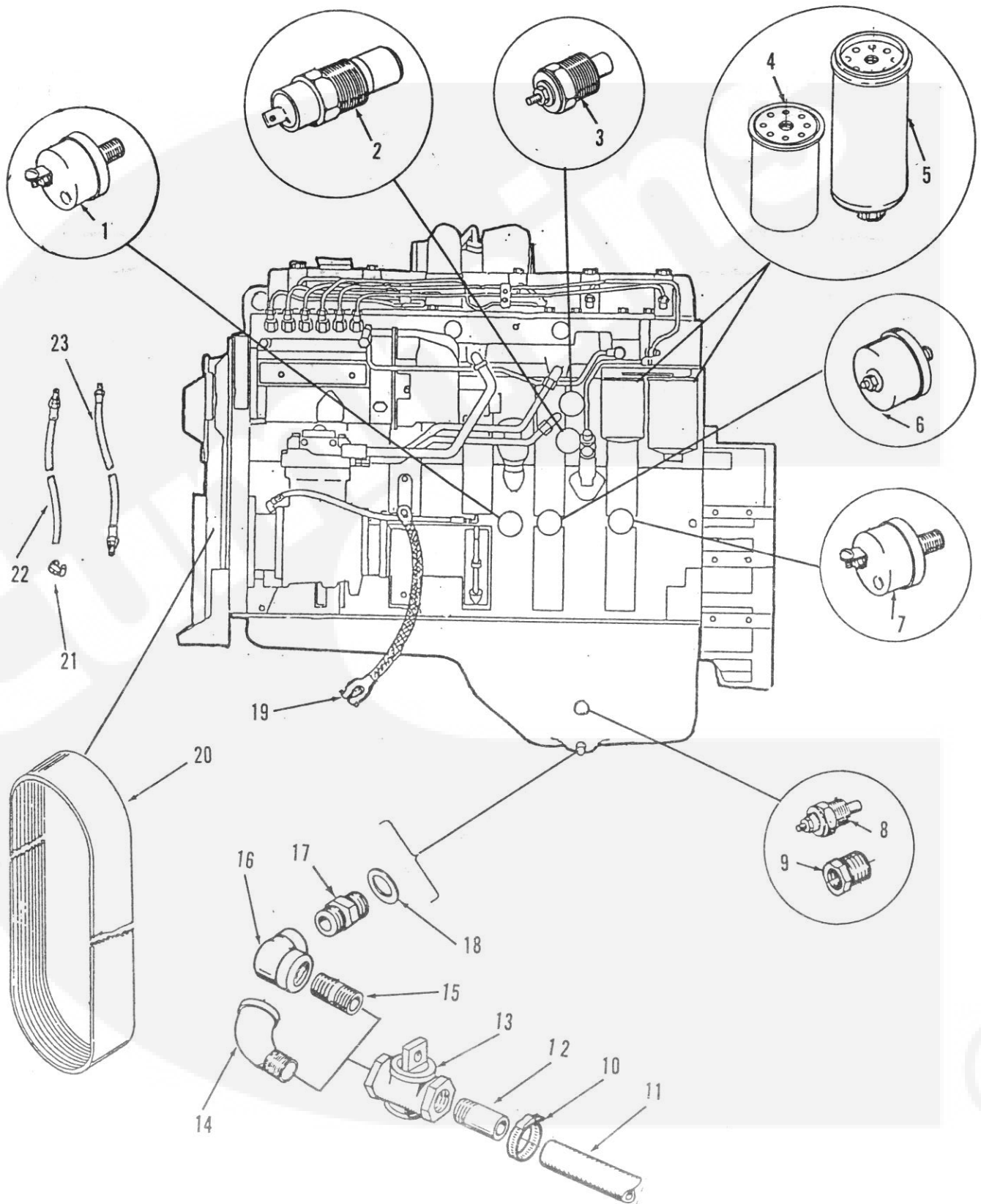
External Engine Components Left Side

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-2110	1	Screw, Cap - Hex Head (M12 x 1.75 x 20mm)	11	Note 1		Filter, Water - W/Corrosion Inhibiting Chemical DCA4
2	856-0013	1	Washer, Lock - EIT (1/2")		130-3537	1	Service
3	332-2739	1	Terminal Assembly (Includes item 3 thru 7)		130-3539	1	Pre-Charging
4	809-0035	1	Screw, Tapping - Round Head (#8 x 3/4")	12	309-0554	1	Switch, Thermostatic-Engine Coolant Temperature (S2)
5	508-0015	1	Washer, Insulating	13	505-0021	1	Bushing, Reducer
6	870-0196	1	Nut, Insulated	14	Note 2	1	Alternator - 24 VDC (CEC# 3911462) <i>mb 2</i>
7	332-2738	1	Board, Terminal	15	122-0756	1	Element - Oil Filter
8	800-2058	1	Screw, Cap - Hex Head (M8x1.25 x 25mm)	16	416-0923	1	Cable, Battery - Jumper
9	850-2008	1	Washer, Lock (M8)	17	416-0915	1	Cable, Battery (44"Lg)
10	309-0269	1	Switch, Thermostatic- Low Engine Temperature (S4)	18	Note 2	1	Starter, Electrical - 24 VDC (CEC# 3910644)

NOTES:

1. Replacement cartridges recommend and should be used in lieu of the Original Engine Factory Installed Item which contains a Pre-Charge amount of DCA or DCA4 Chemical. Replacement with Pre-charge Cartridge may overload the Cooling System and cause problems or failure of the Set.
2. CEC# - Cummins Engine Company Part Number.

External Engine Components Right Side



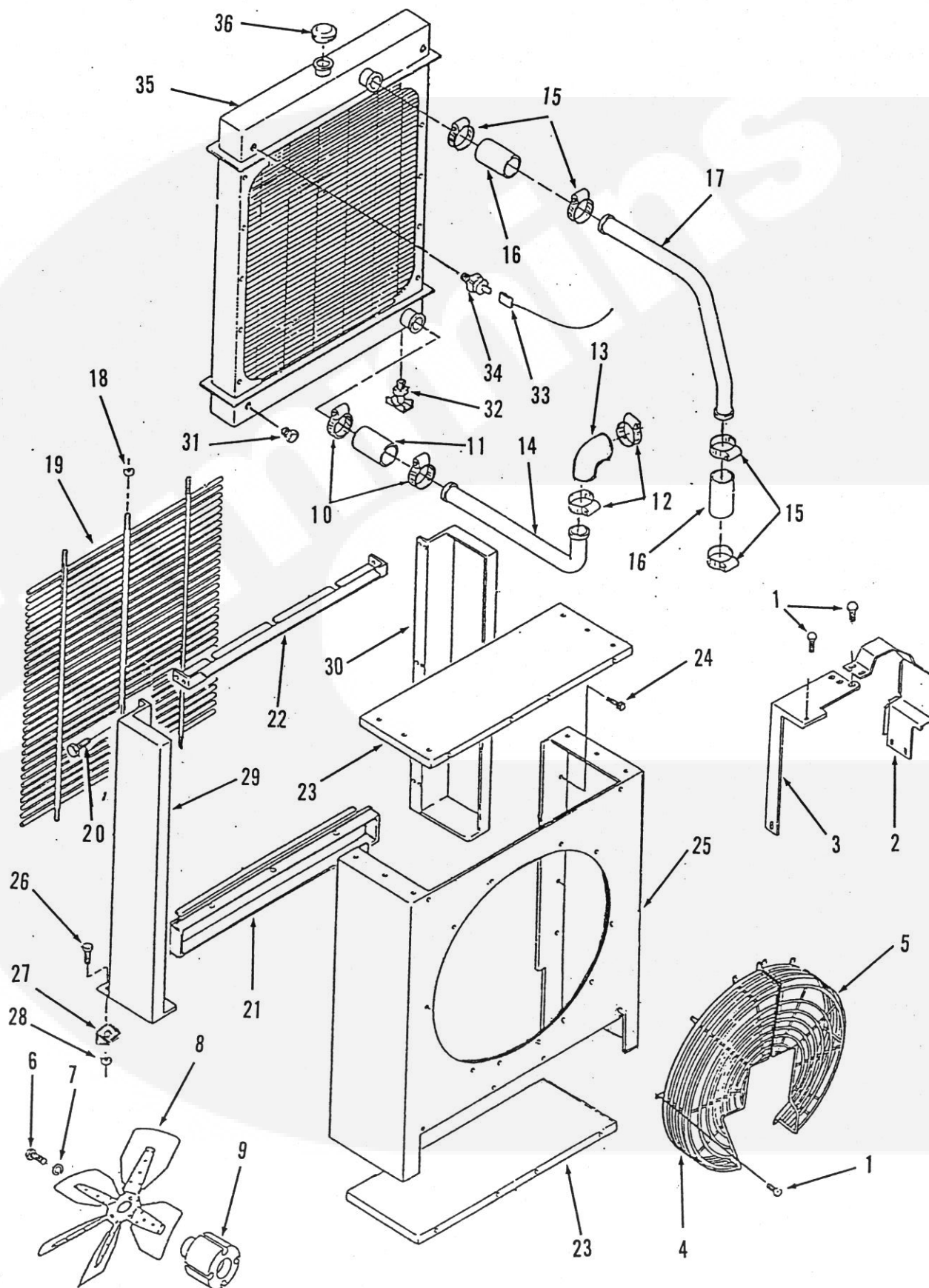
External Engine Components Right Side

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	309-0272	1	Switch, Pressure - Oil, Pre Alarm (S5)(Single Terminal)	11	503-0098	1	Hose
2	309-0553	1	Switch, Thermostatic - Engine Coolant Temperature, Pre-Alarm (S6)	12	505-0185	1	Nipple, Pipe - Half
3	193-0375	1	Sender, Temperature - Engine Coolant (E2)	13	504-0011	1	Valve, Shutoff
4	149-2251	1	Filter, Fuel - Secondary	14	505-0248	1	Elbow, Pipe - Street, 45 Deg.
5	149-2250	1	Filter, Fuel - Primary	15	505-0100	1	Nipple, Pipe (Note 1)
6	193-0244	1	Sender, Pressure - Oil (E1)	16	505-0040	1	Elbow, Pipe - 90 Deg (Note 1)
7	309-0561	1	Switch, Pressure - Oil, Shutdown (S1) (Dual Terminal)	17	102-1237	1	Adapter, Drain - Oil
8	193-0353	1	Sender, Temperature - Oil(E4)	18	102-1147	1	Gasket, Drain - Oil Pan
9	505-1373	1	Bushing, Reducer (M22 x 1/8 NPTF)	19	416-0619	1	Cable, Battery (18"Lg)
10	503-0197	1	Clamp, Hose	20	Note 2	1	Belt, Drive - Fan & Altr
					Note 2	1	6CT Engine(CEC#3911573)
				21	503-0685	1	6CTA Engine(CEC#3911571)
				22	501-0502	1	Clamp, Hose
				23	501-0441	1	Line, Fuel - Flex (Fuel Out)
							Line, Fuel - Flex (Fuel In)

NOTES:

- Optional installation of Oil Drain Components uses items 15 and 16 in lieu of item 14.
- CEC# - Cummins Engine Company Part Number.

Cooling System - Radiator



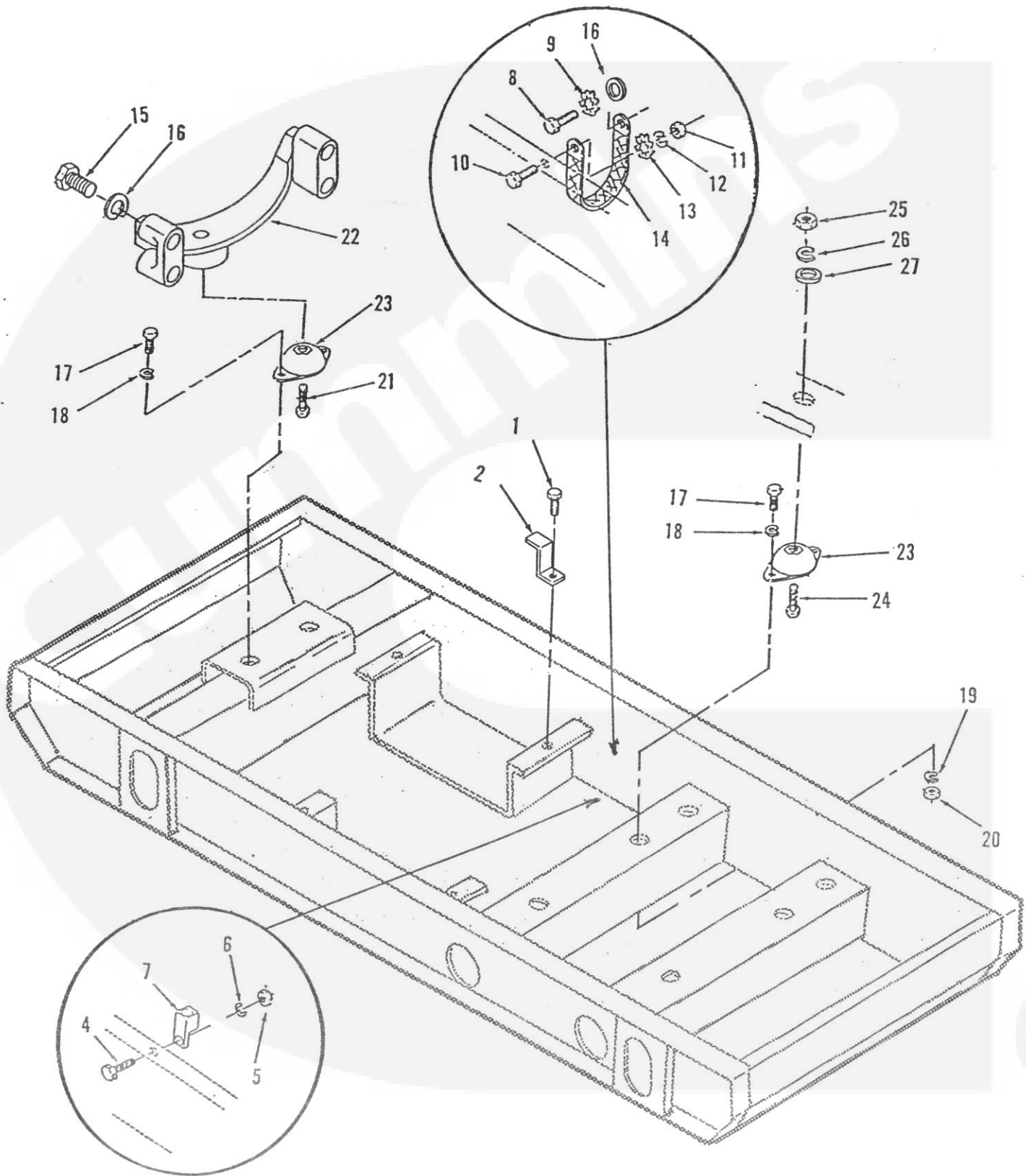
Cooling System - Radiator

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0018	36	Screw, Cap - Hex Head (1/4-20 x 5/8")	20	821-0010	8	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
2	130-3218	1	Guard, Belt	21	130-3204	1	Support, Grille - Lower
3	130-3217	1	Guard, Belt	22	130-3203	1	Support, Grille - Upper
4	130-3209-01	1	Guard, Fan	23	130-3206	2	Shroud - Top/Bottom
5	130-3209-02	1	Guard, Fan	24	821-0028	16	Screw, Self-locking - Hex Washer Head (3/8-16 x 1/2")
6	800-2096	4	Screw, Cap - Hex Head (M10 x 1.5 x 75mm)	25	130-3205	1	Wrapper, Shroud - Fan
7	850-2010	4	Washer, Lock - Spring (M10)	26	801-0049	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
8	130-3208	1	Fan, Radiator	27	526-0280	4	Washer, Bevel
9	130-3216	1	Spacer, Fan	28	870-0281	4	Nut, Self-locking - Hex (3/8-16)
10	503-0365	4	Clamp, Hose	29	130-3202-01	1	Guard, Radiator
11	503-1599	1	Hose, Radiator	30	130-3202-02	1	Guard, Radiator
12	503-1586	2	Clamp, Hose	31	502-0153	3	Plug, Pipe - Hex (1/4 NPT)
13	Note 1	1	Elbow, Hose (CEC#3919389)	32	504-0003	1	Cock, Drain (1/4 NPT)
14	130-3212	1	Tube, Outlet - Radiator	33	338-1919	1	Harness, Wiring
15	503-0465	4	Clamp, Hose	34	183-0322 193	1	Sender, Level - Coolant
16	503-1379-01	2	Hose, Radiator	35	130-3207	1	Radiator (Includes Cap)
17	130-3211	1	Tube, Inlet - Radiator	36	130-1788	1	Cap, Radiator - 14 PSI
18	870-0281	6	Nut, Self-locking - Hex (3/8-16)				
19	130-3210	1	Grille - Radiator				

NOTES:

1. CEC# - Cummins Engine Company Part Number.

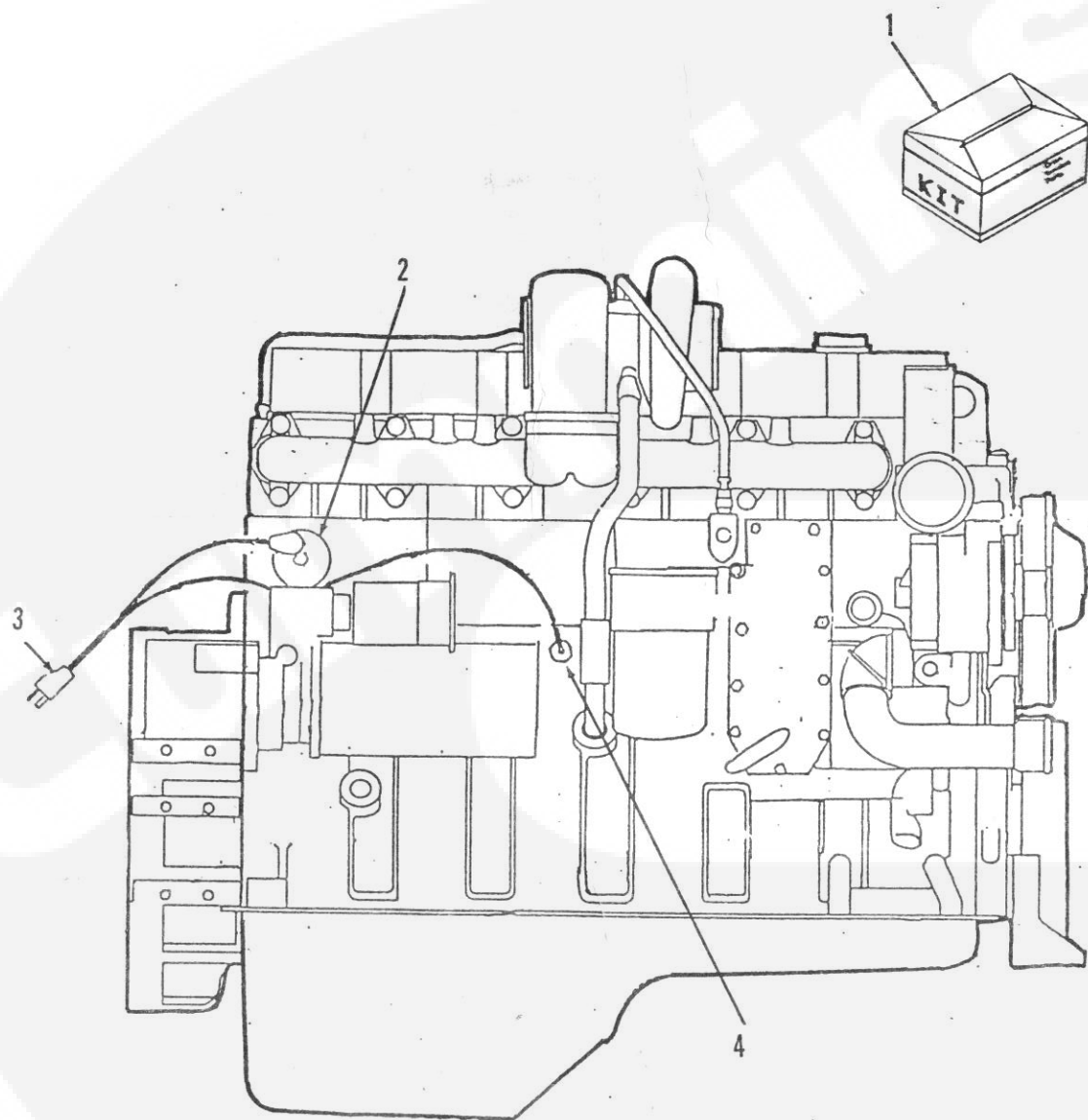
Chassis



Chassis

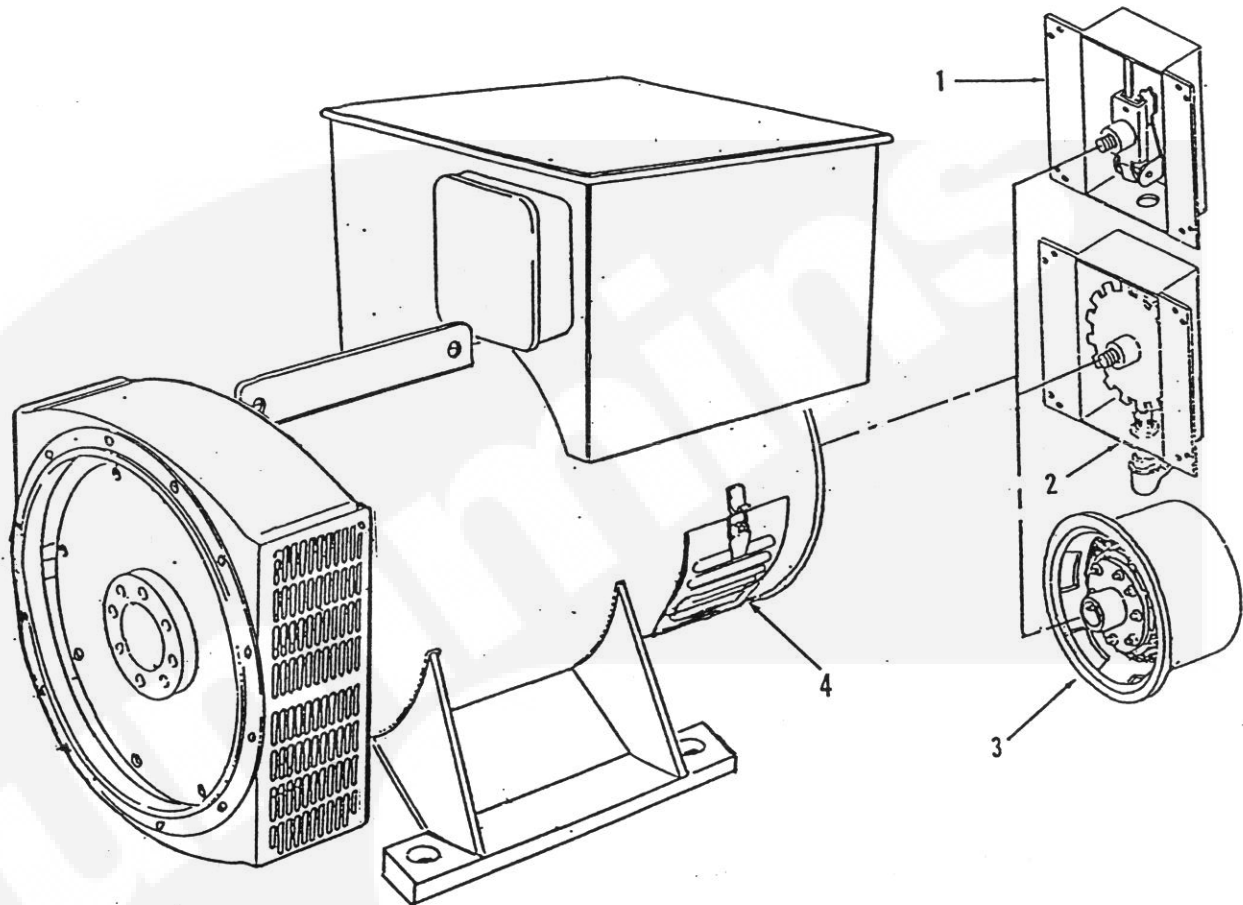
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0048	4	Screw, Cap - Hex Head (3/8-16 x 3/4")	15	800-2124	4	Screw, Cap - Hex Head (M12 x 1.75 x 90mm)
2	416-0850	4	Bracket, Retaining	16	850-2012	5	Washer, Lock (M12)
4	800-0026	1	Screw, Cap - Hex Head (5/16-18 x 3/4")	17	800-0092	10	Screw, Cap - Hex Head (1/2-13 x 1-1/2")
5	856-0008	1	Washer, Lock - EIT (5/16)	18	850-0060	10	Washer, Lock - Spring (1/2")
6	870-0257	1	Nut, Lock (5/16-18)	19	526-0219	10	Washer, Flat (1/2")
7	332-1473	1	Lug, Solderless	20	862-0016	10	Nut, Hex (1/2-13)
8	800-2111	1	Screw, Cap - Hex Head (M12 x 1.75 x 25mm)	21	800-0520	1	Screw, Cap - Hex Head (3/4-10 x 1")
9	856-0013	1	Washer, Lock - EIT (1/2")	22	403-2690	1	Support, Engine
10	800-0092	1	Screw, Cap - Hex Head (1/2-13 x 1-1/2")	23	402-0568	5	Mount, Vibration
11	862-0016	1	Nut, Hex (1/2-13)	24	800-0156	4	Screw, Cap - Hex Head (3/4-10 x 2-1/4")
12	850-0060	1	Washer, Lock - Spring (1/2")	25	862-0008	4	Nut, Hex (3/4-10)
13	856-0013	1	Washer Lock - EIT (1/2")	26	850-0079	4	Washer, Lock - Spring (3/4")
14	337-0090	1	Strap, Electrical	27	526-0233	4	Washer, Flat (3/4)

Engine Coolant Heater



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Kit - Engine Coolant Heater (Includes one each of items 2 thru 4)	2			Heater, Electrical
	333-0393-01	1	120 Volts		333-0391	1	120 Volts
	333-0393-02	1	240 Volts		333-0392	1	240 Volts
				3			Cord, Electrical
					335-0162	1	120 Volts
					335-0163	1	240 Volts
				4	309-0555	1	Switch, Thermostatic

Generator Frame 3

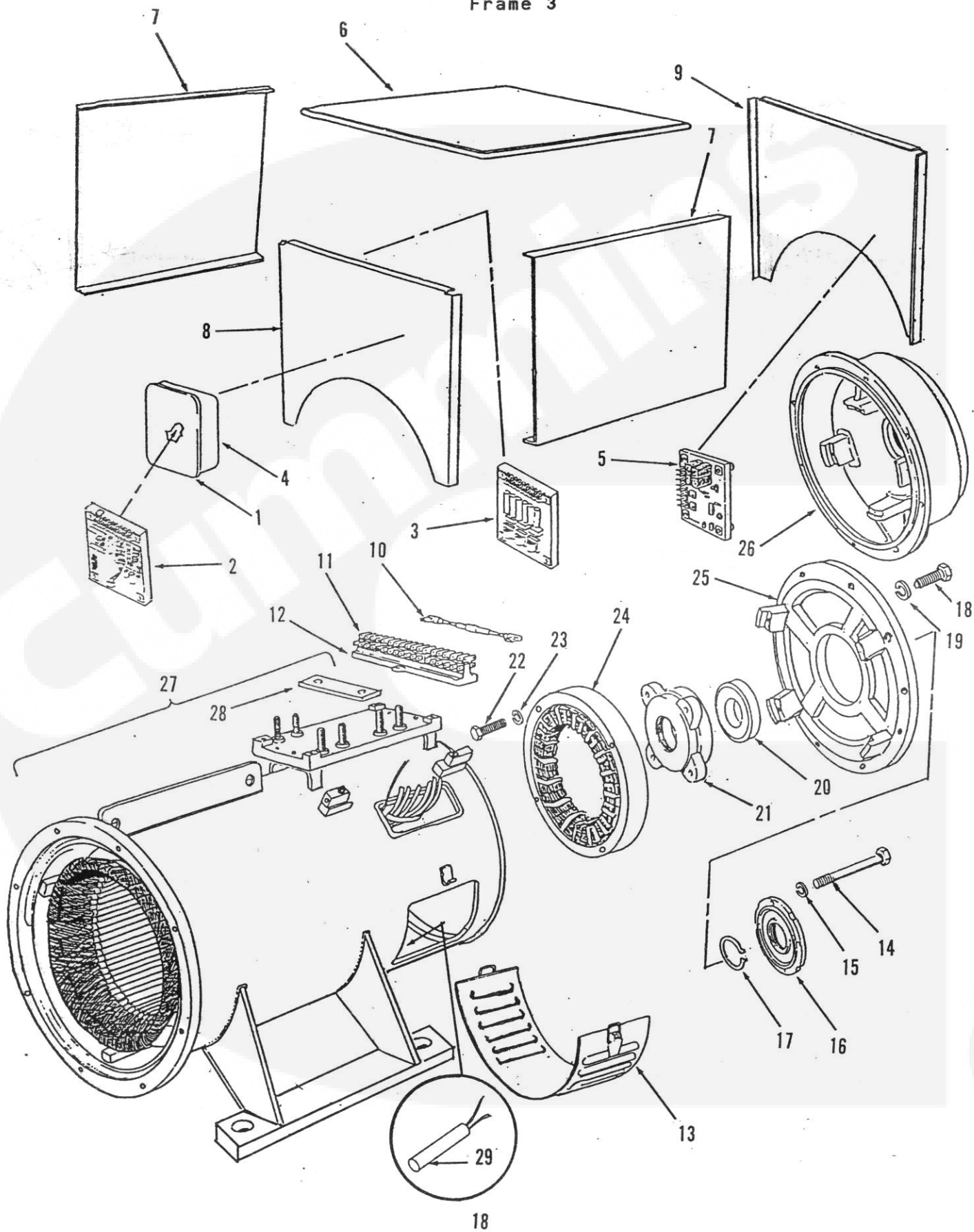


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	Note 1	1	Module, Overspeed Switch (See Separate Page for Components)	4	Note 2		Generator (See Separate Pages for Stator and Rotor Components)
	821-2045	4	Attaching Parts Screw, Self-locking - Hex Hd (M8 x 1.25 x 16mm)				Attaching Parts Generator to Chassis
2	Note 1	1	Module, Overspeed Sensor (See Separate Page for Components)		800-0156	4	Screw, Cap - Hex Head (3/4-10 x 2-1/2")
	821-2045	4	Attaching Parts Screw, Self-locking - Hex Hd (M8 x 1.25 x 16mm)		850-0079	4	Washer, Lock - Spring (3/4")
3	Note 1	1	Module, Permanent Magnet Exciter (See Separate Page for Components)		526-0238	4	Washer, Flat (3/4")
	249-0298	4	Attaching Parts Screw, Cap - Hex Head (M8 x 16mm)		862-0008	4	Nut, Hex (3/4-10)
	249-0218	4	Washer, Lock (M8)		800-2088	12	Adapter to Flywheel Housing Screw, Cap - Hex Head (M10 x 1.5 x 35mm)
	249-0315	4	Clamp, Retaining		850-2010	12	Washer, Lock - Spring (M10)
					805-0015	8	Drive Disc to Flywheel Bolt - Hex Head (3/8-16 x 3/4", Grade 8)
					526-0124	8	Washer, Flat (1-1/2"OD x 13/32"ID)

Notes:

- Components for Modules located on separate pages, consult Table of Contents for page number.
- For replacement Generator please supply the complete Gen Set nameplate and Generator nameplate data.

Generator Stator Section Frame 3



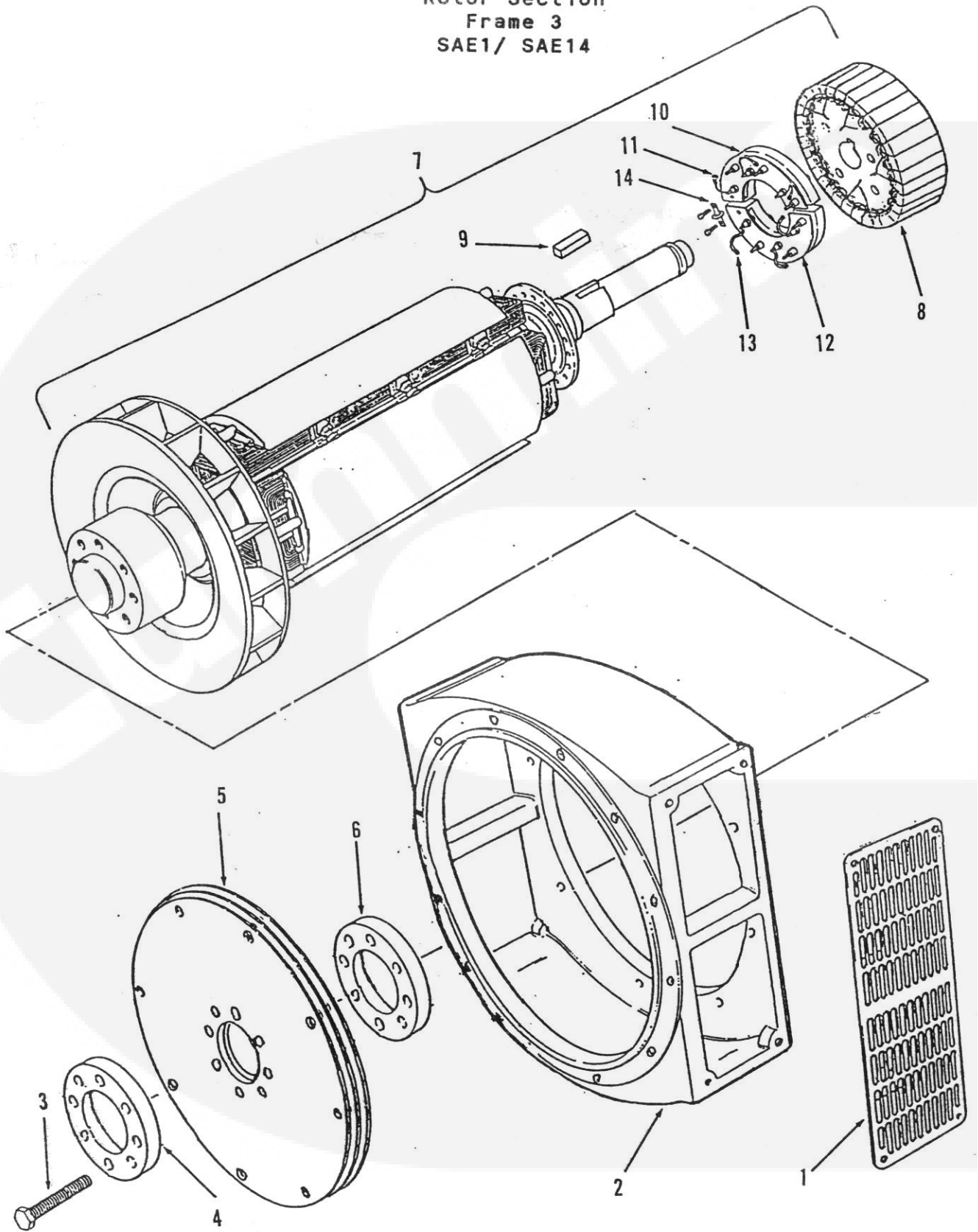
**Generator
Stator Section
Frame 3**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	249-0631	2	Lid, Electrical Box - Plain	14	249-0302	4	Screw, Cap - Hex Head (M10 x 65mm)
	249-0304	8	Attaching Parts	15	249-0202	4	Washer, Lock - Spring (M10)
2			Screw, Captive	16	249-0362	1	Cap, Bearing - Outer
	305-0779	1	Regulator, Voltage	17	249-0444 0310	1	Circlip
			1 or 3 Phase, Series 4	18	249-0201	8	Screw, Cap - Hex Head (M10 x 35mm)
	305-0770	1	Excitation(Non PMG)	19	249-0202	8	Washer, Lock - Spring (M10)
	305-0778	1	1 Phase (Used with PMG)	20	249-0312	1	Bearing, Ball
			3 Phase (Used with PMG Exciter & 3 Phase Sensing Module)	21	249-0361	1	Cap, Bearing - Inner
	305-0803	1	Manual	22			Screw, Cap - Hex Head (M6 x 55mm) Gen334AS, A or B
			Attaching Parts		249-0297	4	(M6 x 70mm) Gen334C or D
	249-0398	4	Pillar, Threaded		249-0291	4	Washer, Lock - Spring (M6)
3	249-0564	1	Module, 3 Phase Sensing	23	249-0212	4	Stator, Exciter
			Attaching Parts	24			Gen334AS, A or B
	249-0398	4	Pillar, Threaded		249-0334	1	Gen334C or D
4	249-0395	1	Box		249-0366	1	Bracket, End
5	300-3209-02	1	Module, Frequency Detection	25	249-0354	1	Gen334AS, A or B
			Attaching Parts	26	249-0355	1	Bracket, End
	249-0295	4	Screw, Cap - Hex Head (M5 x 35mm)				Gen334C or D
	249-0288	4	Washer, Plastic (M5)	27	Note 2	1	Stator, Generator (Includes Terminal Studs and Links)
	249-0287	4	Nut, Hex - Nylon (M5)				Attaching Parts Stator to Adapter
6	Note 1	1	Lid		249-0201	8	Screw, Cap - Hex Head (M10 x 35mm)
7	Note 1	2	Panel, Side				Washer, Lock - Spring (M10)
8	Note 1	1	Panel, Front		249-0202	8	Link, Terminal
9	Note 1	1	Panel, Rear	28	249-0404	4	Heater, Electrical - Replacement
10	249-0428	1	Resistor (Voltage Code H Only)	29			70 Watt, 120 VAC
11	249-0289	3	Block, Terminal - AUX		249-0621	1	70 Watt, 240 VAC
12	249-0424	1	Base, Terminal - AUX		249-0622	1	
13	249-0368	2	Grille, Inlet - Air				

Notes:

1. Parts NOT STOCKED for replacement; If needed supply complete Gen Set nameplate data.
2. Part NOT STOCKED; Replacement is by complete Generator Assembly; please supply the complete Gen Set nameplate and the Generator nameplate data.

Generator
Rotor Section
Frame 3
SAE1/ SAE14



**Generator
Rotor Section
Frame 3
SAE1/ SAE14**

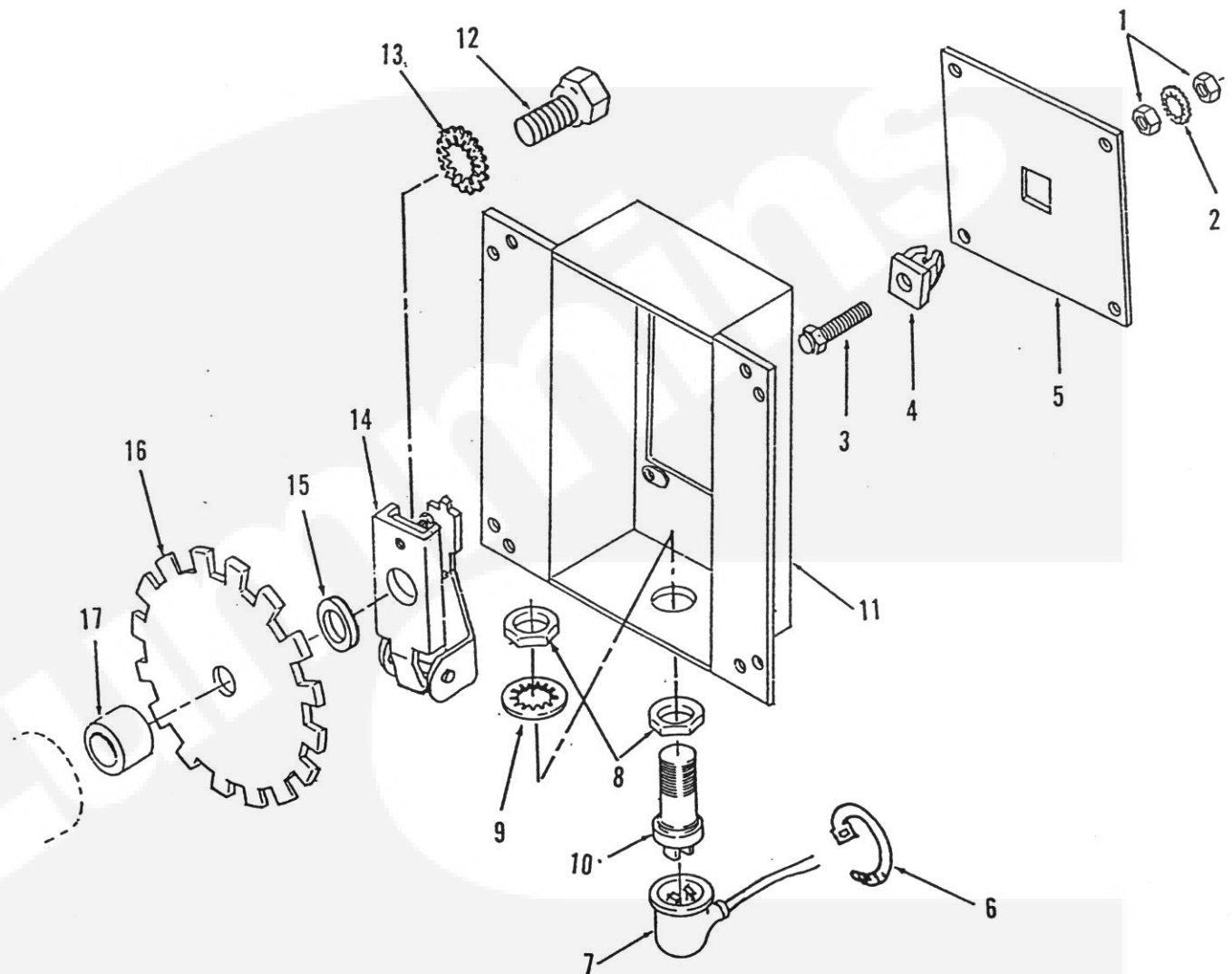
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	249-0371	2	Screen, Air - Adapter	8			Rotor, Exciter (Does Not
			Attaching Parts				Include Rectifier Assy)
	249-0294	8	Screw, Cap - Hex Head		249-0336	1	Gen334AS
			(M5 x 12mm)		249-0367	1	Gen334A, B, C or D
	249-0307	8	Washer, Lock - Spring (M5)	9	249-0271	1	Key
	249-0308	8	Washer, Flat (M5)	10	249-0340	1	Rectifier Assy, Forward
2	249-0369	1	Adapter, Generator (SAE1)				(Includes Item 11 Diodes)
3	249-0292	8	Screw, Cap - Hex Head	11	249-0281	3	Diode, Forward Polarity
			(M16 x 60mm)	12	249-0341	1	Rectifier Assy, Reverse
4	249-0402	1	Plate, Pressure				(Includes Item 13 Diodes)
5	249-0328	3	Disc, Drive (SAE14)	13	249-0282	3	Diode, Reverse Polarity
6	249-0363	1	Spacer	14	249-0283	1	Varister
7	Notel	1	Rotor, Generator (Includes				Attaching Parts
			Exciter, Key, and Rectifier		249-0294	2	Screw, Cap - Hex Head
			Assemblies)				(M5 x 12mm)

Notes:

1. Part NOT STOCKED; Replacement is by complete Generator Assembly; please supply the complete Gen Set nameplate and the Generator nameplate data.



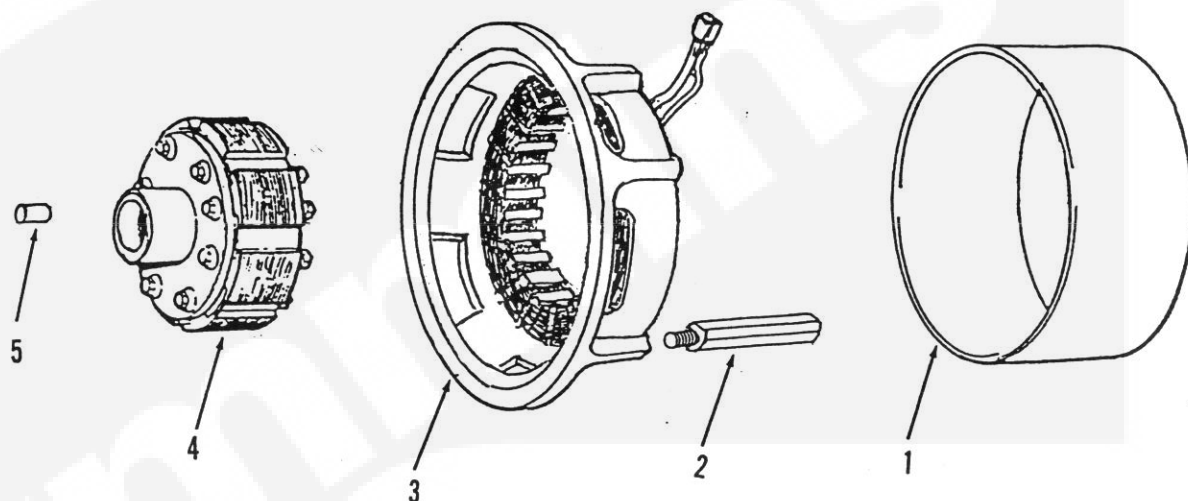
Generator Overspeed Sensor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	862-0001	2	Nut, Hex (1/4-20)	9	854-0031	1	Washer, Lock - IT (3/4")
2	853-0013	1	Washer, Lock - EIT (1/4")	10	150-1406	1	Sensor, Speed
3	150-0723	1	Point, Overspeed	11	150-2207	1	Cover, Overspeed Switch
4	870-0250	1	Nut, Insulated	12	718-1058	1	Screw, Cap - Hex Head (M10 x 1.5 x 45mm)
5	150-2206	1	Plate, Mounting	13	856-0010	1	Washer, Lock - EIT (3/8")
	821-0005	4	Screw, Self-locking - Hex (#10-32 x 1/2")	14	150-0956	1	Switch, Overspeed
6	332-1445	5	Tie, Cable	15	370-4031	1	Spacer, Sleeve
7	338-2189-02	1	Harness, Wiring	16	150-2204	1	Wheel - Speed Sensor
8	868-0011	2	Nut, Jam - Hex (3/4-16)	17	370-4032	1	Spacer, Sleeve



Generator Permanent Magnet Exciter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	249-0497	1	Cover
	249-0294	3	Attaching Parts for Cover Screw, Cap - Hex Head (M5 x 12mm)
	249-0307	3	Washer, Lock (M5)
2	249-0496	3	Pillar, Threaded
3	249-0426	1	Stator, Exciter with Frame

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4			Rotor, Exciter
	249-0427	1	Frame 2, 3, 4 Generators
	249-0644	1	Frame 5, 6, 7 Generators
			Attaching Parts for Rotor
			Bolt - Select as Required
	249-0399	1	Frame 2, 3, 4 Generators
	249-0495	1	Frame 5, 6, 7 Generators
	249-0202	1	Washer, Lock (M10)
5	249-0313	1	Pin, Dowel

This diagram illustrates the assembly of a mechanical unit, likely a control panel or a small machine. The components are numbered as follows:

- 1:** Screws used for mounting panels.
- 2:** Top and side panels.
- 3:** A small circular component, possibly a gasket or washer.
- 4:** A small circular component, possibly a gasket or washer.
- 5:** A control panel with multiple switches and a dial.
- 6:** A screw.
- 7:** A washer or spacer.
- 8:** A bracket or mounting plate.
- 9:** A control panel with multiple switches and a dial.
- 10:** A control panel with multiple switches and a dial.
- 11:** A small component, possibly a switch or indicator.
- 12:** A component, possibly a switch or indicator.
- 13:** A small circular component, possibly a gasket or washer.
- 14:** A screw.
- 15:** A nut.
- 16:** A bracket or mounting plate.
- 17:** A base plate or mounting plate.

The diagram shows the assembly of the control panel (9) into the main unit (10) using screws (1) and washers (7). The base plate (17) is also shown with various mounting points and components like the control panel (9) and the bracket (16).

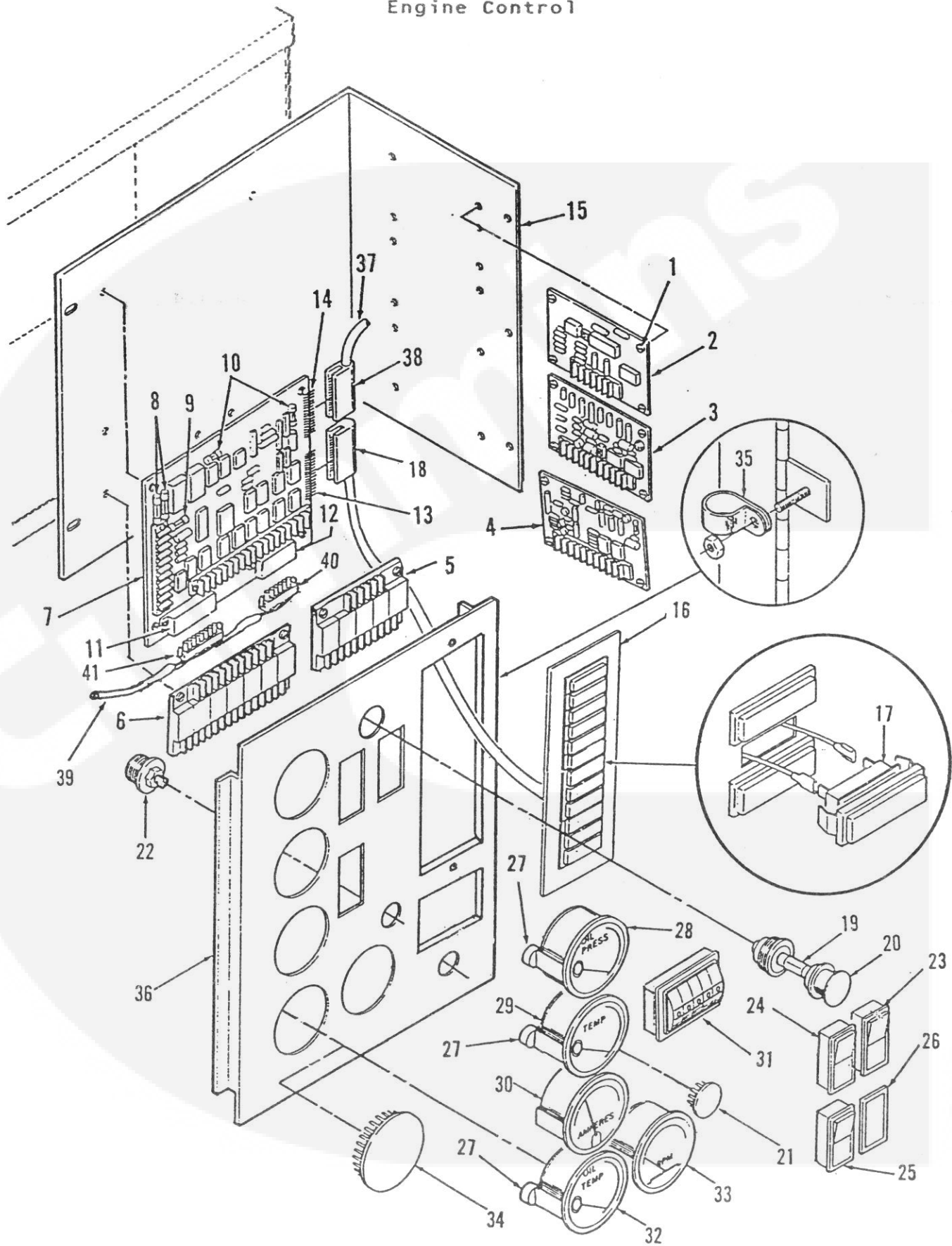
Generator Set Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0005	18	Screw, Self-locking - Hex (#10-32 x 1/2")	12			Transformer, Current - Reconnectible
2	319-0077	3	Panel, Box - Control	302-1794-02	3		Ratio 100/5 or 200/5
3	812-0156	4	Screw, Machine - Round Head (1/4-20 x 1/2")	302-1794-04	3		100 & 150kW Voltage Code H
4	850-0040	4	Washer, lock - Spring (1/4")	302-1794-05	3		Ratio 200/5 or 400/5
5	Note 1	1	Transformer Assy, Potential (See Separate Page for Components)	302-1794-07	3		100kW Voltage Code Z.
6	800-0051	4	Screw, Cap - Hex Head (5/16-18 x 1/2")				Ratio 250/5 or 500/5
7	850-0045	4	Washer, Lock - Spring (5/16")	13	508-0051	1	Ratio 375/5 or 750/5
8	Note 1	1	Control, Set (See item 9 & 10 for Components)	14	821-0018	6	135kW Voltage Code Z
9	Note 1	1	Control, Engine (See Separate Page for Components)	15	870-0212	6	150kW Voltage Code L
10	Note 1	1	Control, Generator (See Separate Page for Components)	16	301-3155	1	Grommet
11	332-0941	6	Tie, Cable	17	319-0011	1	Screw, Self-locking - Hex Head (1/4-20 x 5/8")
							Nut, Self-locking - Hex (1/4-20)
							Housing, Control
							Adapter, Housing to Terminal Box (Frame 3 Generators)

Notes:

1. Components for Controls located on separate pages, consult Table of Contents for page number.

Engine Control



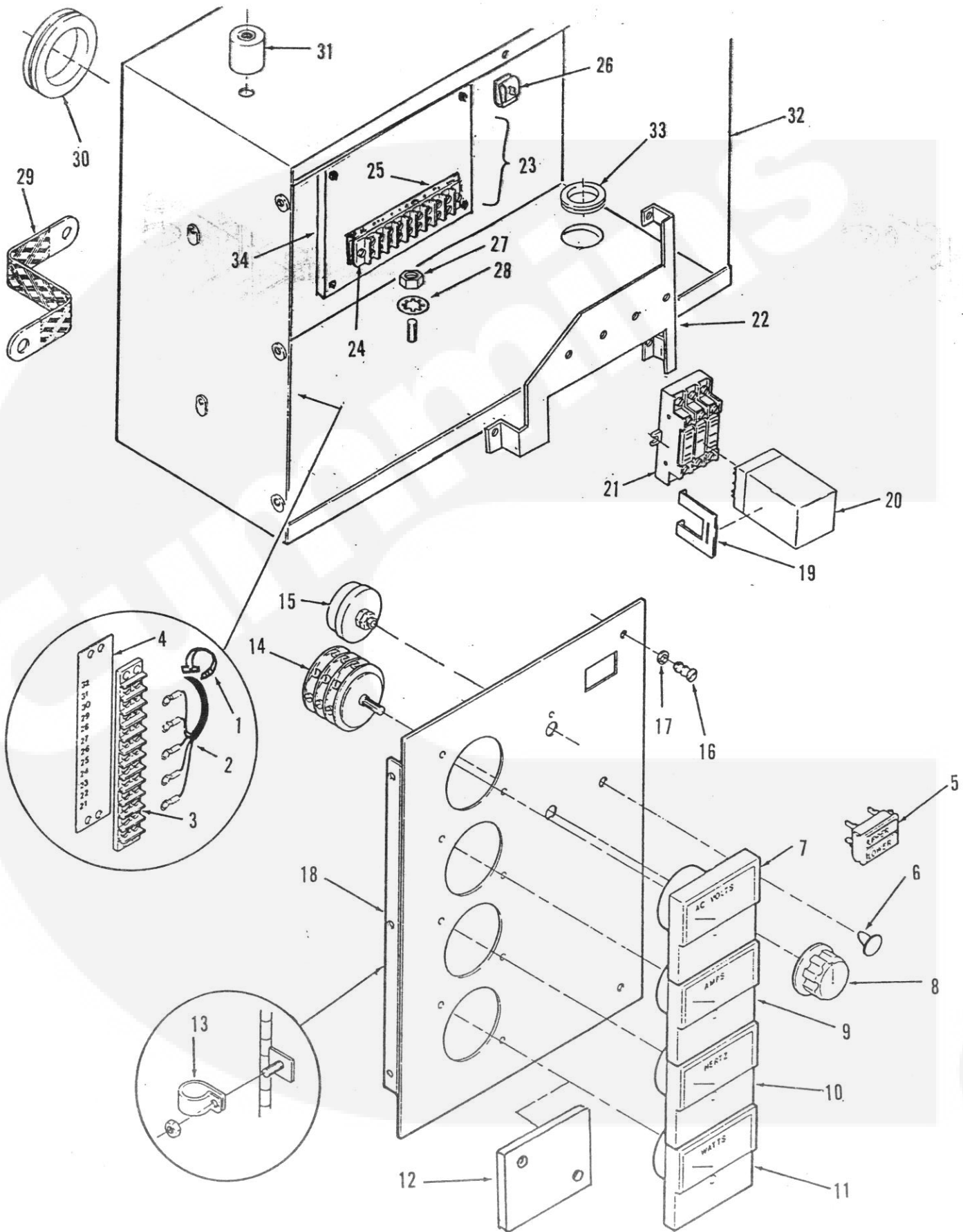
Engine Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	815-0544	24	Screw, Machine - Round Head With IT Lock Washer (#6-32 x 1/2")	17	322-0369-02	12	Lamp, Incandescent - 1/3 Watt 28 VDC
2	300-2899	1	Board, Time Delay, Start/Stop - 24 VDC (A15)	18	323-1310	1	Housing, 13 Pin (J3)
3			Board, Magnetic Sensor, Start Disconnect/Over Speed Sensor (A16)	19	322-0017	1	Contact, Pin
	300-2903	1	Standard	20	322-0361	1	Lamp, Incandescent - 28 VDC (DS11)
	300-2904	1	Precision	21	517-0131	1	Holder, Lamp
4	300-2906	1	Board, Over-Under Voltage Sensor - 24 VDC (A17)	22	303-0280	1	Plug, Button
5	300-2856	1	Board, Relay - 24 VDC (A13)	23	308-0785	1	Potentiometer (R11)
5A	338-1836	1	Harness (A13 to A11) Note 2	24	308-0784	1	Switch, Push (S11)
6	300-2863	1	Board, Relay - 24 VDC (A14)	26	301-6257	1	Switch, Push (S12)
6A	338-1835	1	Harness (A14 to A11) Note 2	27	301-6257	1	Cover
7			Board, Engine Monitor (A11) (Includes Fuses and Connectors)	28	193-0250	3	Resistor, Gauge (R12)
	300-2808	1	24 VDC, 2 Light	29	193-0352	1	Gauge, Pressure - Oil (M11)
	300-2812	1	24 VDC, 12 Light	30	193-0351	1	Gauge, Temperature - Water (M12)
8	321-0270	2	Fuse, Cartridge - 20 Amp (F1, F2)	31	302-1790	1	Ammeter (M13)
9	321-0231	1	Fuse, Cartridge - 15 Amp (F3)	31	302-0885	1	Meter, Totalizing - Time (M14)
10	321-0094	2	Fuse, Cartridge - 5 Amp (F4, F5)		815-0385	2	Screw, Machine - Round Head (#6-31 x 1/2")
11	323-1305	1	Connector, 8 Pin (P1)		870-0183	2	Nut, Hex with ET Lockwasher (#6-32)
12	323-1303	1	Connector, 6 Pin (P2)	32	193-0330	1	Gauge, Temperature - Oil (M15)
13	323-1309	1	Connector, 13 Pin (P3)	33	302-1873-01	1	Tachometer (M16)
14	323-1307	1	Connector, 12 Pin (P4)	34	517-0221	1	Plug, Button
15	301-8851	1	Bracket, Mounting	35	332-0052	1	Clamp, Loop
	821-0004	4	Screw, Self-locking - Hex Hd (#10-32 x 5/16")		870-0131	1	Nut, Hex with ET Lockwasher (#10-32 x 1/2")
16			Module, Indicator - Fault (Includes Replaceable Lamps, Harness with Connector Housing & Contact Pins)(A12)	36	Note 1	1	Door, Control
	322-0358-02	1	24 VDC, 2 Light	37	338-1817	1	Harness, Wiring - DC Meter (Includes Connector & Pins)
	322-0360-02	1	24 VDC, 12 Light	38	323-1308	1	Housing, 12 Pin (J4)
	815-0385	2	Screw, Machine - Round Head (#6-32 x 1/2")	39	323-1302	12	Contact, Pin
	870-0183	2	Nut, Self-locking - Hex (#6-32)				Harness, Wiring - Control to Engine (Includes Connectors and Pins)
					338-2369	1	Use with 2 Fault Light Cont.
					338-2171	1	Use with 12 Fault Light Cont.
				40	323-1304	1	Housing, 6 Pin
					323-1200	6	Contact, Pin
				41	323-1306	1	Housing, 8 Pin
					323-1200	8	Contact, Pin

Notes:

- Selection required do to the varations in cutouts for meters, switches, etc; Contact nearest Authorized Distributor, provide configuration data for panel required. Distributor will consult with the Parts Technical Information Center for the replacement panel.
- Not Illustrated.

Generator Control



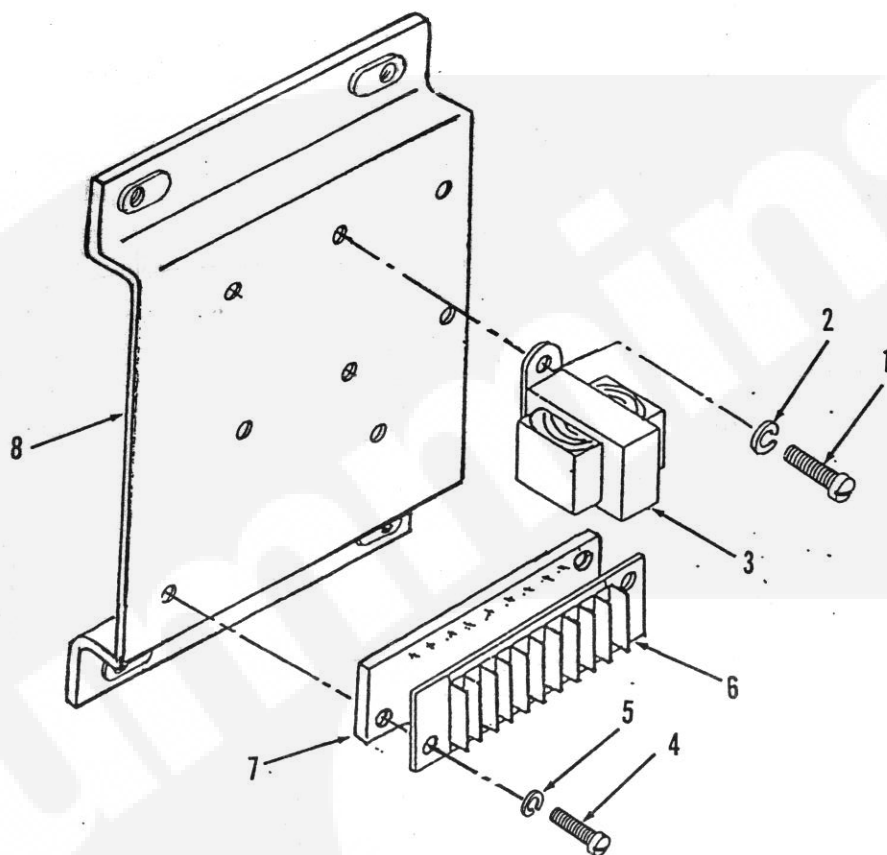
Generator Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-1445	2	Tie, Cable	18	Note 2	1	Door, Control
2	338-2375	1	Harness, Wiring		821-0004	3	Screw, Self-locking - Hex (#10-32 x 5/16")
	812-0065	2	Screw, Machine - Round Head (#6-32 x 5/8")	19	307-1987	6	Clip, Relay
3	332-0607	1	Block, Terminal (TB1)	20	307-1056	3	Relay, 24 VDC (K21)
4	332-2723	1	Strip, Marker	21	323-0804	3	Socket, Relay
5	322-0363	1	Light, Indicator - Dual (DS21, DS22)		815-0544	6	Screw, Machine - Round Head with IT Lock Washer (#6-32 x 1/2")
6	517-0131	1	Plug, Button				Bracket, Mounting - Relay
7			Voltmeter (M21)	22	319-0447		Screw, Machine - Round Head (#6-32 x 5/8")
	302-1148	1	Dual Scale 0-300/0-600V		812-0065	4	Terminal Board Assembly
	302-1753	1	Single Scale 0-750V				Block, Terminal
8	303-0032	1	Knob	23	301-9856	1	Screw, Machine - Round Head (#6-32 x 3/4")
9			Ammeter (M22)	24	332-0751	2	Strip, Marker
			Single Scale		812-0066		Receptacle, Fastener
	302-1176	1	0-200 Amp	25	332-0853	1	Nut, Hex (1/4-20)
			Dual Scale Volt. Codes L & Z	26	406-0332	2	Washer, Lock - ET (1/4")
	302-1724	1	250/500 Amp	27	871-0015	1	Strap, Electrical (Ground)
	302-1725	1	375/750 Amp	28	853-0013	1	Screw, Cap - Hex Head (5/16-18 x 1/2")
10	302-1720	1	Meter, Frequency (M23)	29	337-0049	1	Washer, Lock - EIT (5/16")
11	Note 1	1	Wattmeter (M24) (See Separate page for Components)		800-0024		Grommet
12	301-9993	1	Cover, Meter Hole		856-0008	1	Mount, Vibration
	815-0385	2	Screw, Machine - Round Head, Black (#6-32 x 1/2")	30	508-0051	1	Screw, Cap - Hex Head (5/16-18 x 1/2")
	870-0183	2	Nut, Hex with ET Lockwasher (#6-32)	31	402-0527	2	Washer, Lock - Spring (5/16")
13	332-0052	1	Clamp, Loop		850-0045	4	Box, Control
	870-0131	1	Nut, Self-locking - Hex with ET Lock Washer (#10-32)				Grommet
14	308-0284	1	Switch, Rotary (S21)	32	301-8065	1	Plate
15	303-0287	1	Rheostat (R21)	33	508-0001	1	
16	406-0334	2	Clip, Fastener	34	301-9855	1	
17	406-0333	2	Stud, Fastener				

Notes:

- Components for Moduless located on separate pages, consult Table of Contents for page number.
- Selection required do to the varations in cutouts for meters, switches, etc; Contact nearest Authorized Distributor, provide configuration data for panel required. Distributor will consult with the Parts Technical Information Center for the replacement panel.

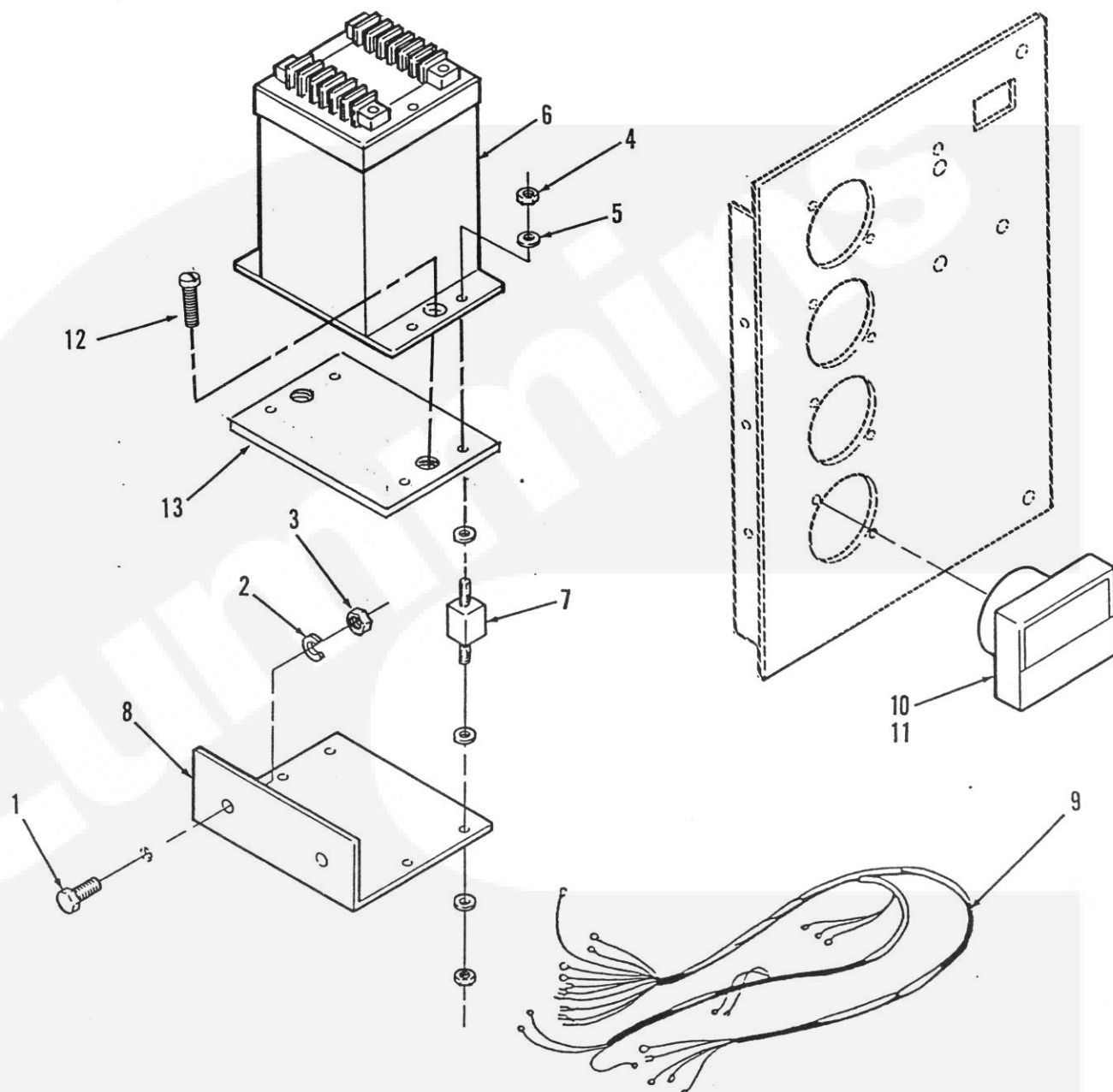
Potential Transformer



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0079	6	Screw, Machine - Round Head (#8-32 x 1/2")
2	850-0025	6	Washer, Lock - Spring (#8)
3	315-0642	3	Transformer, Potential
4	812-0082	2	Screw, Machine - Round Head (#8-32 x 3/8")
5	850-0025	2	Washer, Lock - Spring (#8)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	332-2562	1	Block, Terminal (10 Place)
7	332-2563	1	Strip, Marker
8	319-0032	1	Bracket, Mounting
	812-0156	4	Attaching Parts for Bracket
			Screw, Machine - Round Head (1/4-20 x 1 1/2")
	850-0040	4	Washer, Lock - Spring (1/4")

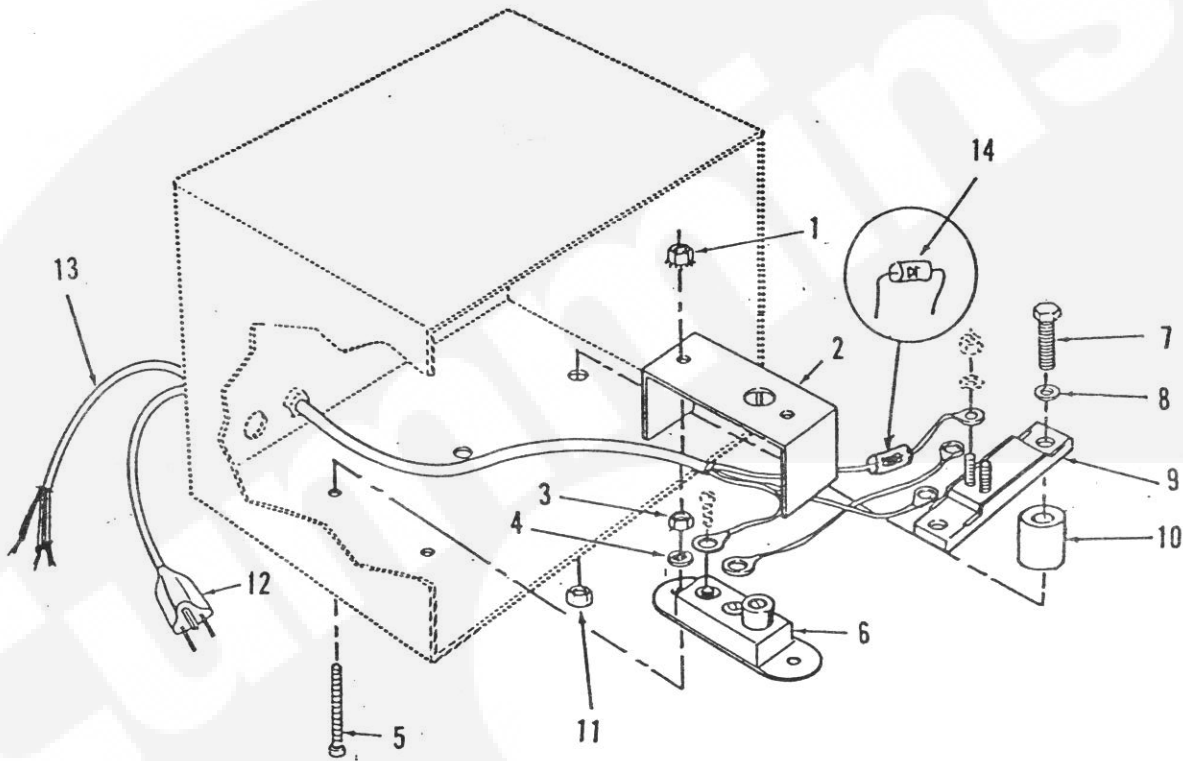
Wattmeter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0017	2	Screw, Cap - Hex Head (5/16-18 x 1/2")
2	850-0045	2	Washer, Lock (5/16)
3	862-0014	2	Nut, Hex (5/16-18)
4	860-0008	8	Nut, Hex (#8-32)
5	856-0002	16	Washer, Lock - ET (#8)
6	302-1833-01	1	Transducer, Watt
7	402-0354	4	Mount, Shock
8	301-6987	1	Bracket, Mounting

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
9	338-1936	1	Harness, Wiring
10	302-1722	1	Wattmeter (Less Dial)
11	302-1721-06	1	Scale 0-160kW
	302-1721-07	1	Scale 0-180kW
	302-1721-08	1	Scale 0-200kW
12	813-0102	2	Screw, Machine - Round Head (#10-32 x 3/8")
13	319-0030	1	Plate, Support - Transducer

Control Heater



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0183	2	Nut, Self-locking - Hex (#6-32)
2	301-1886	1	Cover
3	860-0006	1	Nut, Hex (#6-32)
4	854-0006	2	Washer, Lock - IT (#6)
5	812-0070	2	Screw, Machine - Round Head (#6-32 x 1-1/4")
6	309-0128	1	Thermostat, Adjustable
7	800-0034	2	Screw, Cap - Hex Head (5/16-18 x 2-1/4")
8	526-0113	2	Washer, Flat (5/16")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
9	333-0151	1	Heater, Electrical 120VAC
	333-0378	1	240VAC
10	130-1107	2	Spacer
11	870-0257	2	Nut, Self-locking - Hex (5/16-18)
12	335-0161	1	Cable, Electrical (120VAC Application)
13	338-2121	1	Harness Wiring with Diode, less plug (240VAC Application)
14	357-0013	1	Diode
15	98-3232	1	Decal, Warning - Shock Hazard (Not Illustrated)

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